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RONALD L. SMITH

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TEXAS INSTRUMENTS INCORPORATED

P O BOX 655474, M/S 3999

DALLAS, TX 75265

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* RONALD L. SMITH, LAVAUGHN F. WATTS JR.,  
and THOMAS R. GRIMM

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Appeal 2008-2236  
Application 08/568,777  
Technology Center 2100

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Decided: <sup>1</sup> February 23, 2009

Before JOSEPH L. DIXON, ALLEN R. MACDONALD, and  
STEPHEN C. SIU, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 15-19, 22, 23, 28, and 30-46. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Data (electronic delivery).

## STATEMENT OF THE CASE

According to Appellants, the invention relates to a portable computer that has an interface for direct connection to a portable telephone.<sup>2</sup> The interface of the computer is utilized to directly connect the portable telephone to the portable computer without the need for a cable or tethered connection.<sup>3</sup> The portable telephone may be constructed to fit within a cavity of the portable computer.<sup>4</sup>

Claim 15 is illustrative:

15. A computer, comprising:

a provision for user input;

a provision for output;

a microprocessor coupled to said user input and said output;  
and

an interface coupled to said microprocessor, said interface being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said portable telephone.

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<sup>2</sup> Spec. 1.

<sup>3</sup> See Spec. Abstract.

<sup>4</sup> *Id.*

The Examiner relies on the following prior art references to show unpatentability:

Kyu	US 4,225,919	Sep. 30, 1980
Morris	US 5,020,090	May 28, 1991
Kobayashi	US 5,111,361	May 5, 1992
Sainton	US 5,249,218	Sep. 28, 1993
Dent	US 5,581,597	Dec. 3, 1996

1. The Examiner rejected claims 15, 17, 19, 22, 23, 28 30-34 and 46 under 35 U.S.C. § 103(a) as unpatentable over Sainton and Morris (Ans. 3-5).
2. The Examiner rejected claims 16 under 35 U.S.C. § 103(a) as unpatentable over Sainton, Morris, and Kyu (Ans. 6).
3. The Examiner rejected claims 18 under 35 U.S.C. § 103(a) as unpatentable over Sainton, Morris, and Dent (Ans. 6).
4. The Examiner rejected claims 45 under 35 U.S.C. § 103(a) as unpatentable over Sainton, Morris, and Kobayashi (Ans. 7).

#### THE REJECTION OVER SAINTON AND MORRIS

*CLAIMS 15, 17, 19, 22-23, 28, 30-44 AND 46*

#### *Appellants Contentions*

Appellants argue that Sainton discloses that the connector 112 of modem 10 in computer 104 is coupled via a black cable 114 to a corresponding connector 118 in a cellular phone 116 (App. Br. 11).

Appellants also argue that the cellular portable telephone 38 of Morris has a battery that must be removed in order to connect it to computer 22, as the same track mechanism that is used to secure the battery pack is the same

track that is used to secure the phone to computer 22 (App. Br. 13). Further, Appellants contend that the battery pack and the computer's 22 interface are mutually exclusive connections for the portable telephone 38 (App. Br. 13).

In addition, Appellants contend that the Examiner's determination that it would have been obvious to maintain a battery in the telephone of Morris (1) to allow using the telephone separately from the computer, and (2) to avoid having to carry a separate battery pack for the telephone, is improper hindsight reconstruction (App. Br. 13). Further, Appellants argue that the resulting device from the combination of Sainton and Morris would not obviate the invention "since the only way that a portable telephone could be coupled to the computer in a manner such that the corresponding interfaces are directly connected, is when the battery is removed from the telephone" (App. Br. 13-14). In addition, Appellants argue that Sainton does not disclose anything that "teaches interfaces and/or track mechanisms that would allow a combination device cell phone to directly couple electrically and mechanically to a portable computer" (App. Br. 14).

Also, Appellants argue that the Examiner's determination that it would have been obvious to maintain the battery in the telephone of Morris would necessitate alterations to the phone of Morris (*See* App. Br. 14). For example, Appellants argue that the Examiner "overlooks the fact that attachment tracks 46 would have to be mounted on the outside surface of a corresponding battery pack, and additional electrical connectors, corresponding to connectors 48, 50, would also have to be installed on the back surface of the battery pack (App. Br. 14). Further, Appellants argue that if modification of the track mechanism of the Morris' phone was so obvious, why Morris did not do it (App. Br. 15). Moreover, Appellants

argue that the Examiner "has failed to set forth any legitimate suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings" (App. Br. 16).

Appellants' arguments, with regards to the requirement of claim 15 that an interface be directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone, will also apply to independent claims 30, 38, 43 and 46 (App. Br. 9-12, 16).

#### *Examiner's Findings*

The Examiner agreed with Appellants that Sainton does not teach connecting the computer to the telephone without a cable or tethered connection (Ans. 8). However, the Examiner concluded that the rejection is not over Sainton alone, but over what the combination of Sainton and Morris would have suggested to a person of ordinary skill in the art at the time of the invention (Ans. 7). The Examiner found that Figure 2 of Morris "expressly shows a direct connection without a cable or tether" (Ans. 8). The Examiner also concluded that "[i]t would have been obvious to a person of ordinary skill in the art at the time of the invention to provide a connection without a cable because this would have prevented having to also carry a cable for interconnection" (Ans. 4).

#### ISSUE

The issue before us, then, is whether Appellants have shown that the Examiner erred in finding that prior art teaches or suggests the limitations of the independent claims. The issue turns on whether the prior art teaches or

suggests an interface that is directly connectable, without a cable or tethered connection, to a corresponding interface in a portable telephone.

#### FINDINGS OF FACT

1. Independent claim 15 recites an "interface being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone" (Claims Appendix, p. 1).
2. Independent claim 30 recites an "interface being directly connectable without a cable or tethered connection to a corresponding interface in *another* portable telephone" (emphasis added) (Claims Appendix, p. 2).
3. Independent claim 38 recites an "interface being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone" (Claims Appendix, p. 3).
4. Independent claim 43 recites an "interface *being located within a cavity in said computer* and directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone" (emphasis added) (Claims Appendix, p. 4).
5. Independent claim 46 recites an "interface being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone" (Claims Appendix, p. 4).
6. Figure 1A of Sainton discloses a portable data communications system that includes a computer 104 that incorporates a modem 110 (Sainton, col. 4, ll. 45-54; Fig. 1A). The modem 110 has a port 112 for connecting the modem to a telephone network access device (Sainton, col. 5, ll. 10-12; Fig. 1A). Port 112 is connected by a cable 114 to a

connector 118 of an access device 116 (Sainton, col. 5, ll. 20-22; Fig. 1A). Terminal 116 is referred to as a radiotelephone 116 (Sainton, col. 5, ll. 32-33; *See also* Fig. 1A). Cable 114, as shown in Fig. 3, is provided with a plug 228 at one end, and a connector 230 at the other end (Sainton, col. 12, ll. 1-3). The connector 228 mates with the port 112 and the connector 230 connects to a mating connector 118 on the cellular telephone 116 (Sainton, col. 12, ll. 3-7).

7. Figure 2 of Morris discloses a cellular telephone 38 that is operational when completely slid into aperture or cavity 18 formed in the generally planar upper surface of housing 20 of computer 22 (*See* Morris, Fig. 1; Fig. 2; Fig. 3; col. 2, l. 67 to col. 3, l. 2; col. 3, ll. 52-62).

#### PRINCIPLES OF LAW

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Discussing the question of obviousness of claimed subject matter involving a combination of known elements, *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007), explains:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would



recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Sakraida v. AG Pro, Inc.*, 425 U.S. 273 (1976) and *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969) are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

*Id.* at 1740. Further, the Court recognized that "when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result." *KSR*, at 1740. If the claimed subject matter cannot be fairly characterized as involving the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement, a holding of obviousness can be based on a showing that "there was an apparent reason to combine the known elements in the fashion claimed." *Id.* at 1740-41. Such a showing requires:

"‘some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ."

*Id.* at 1741 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

The Supreme Court also noted in *KSR* that an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and

creative steps that a person of ordinary skill in the art would employ.” *KSR*, at 1741.

Also, the Court held “that when a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, at 1740, *quoting* from *Sakraid v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976).

If the Examiner’s burden is met, the burden then shifts to the Appellants to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

## ANALYSIS

### THE REJECTION OVER SAINTON AND MORRIS

#### *CLAIMS 15, 17, 19, 22-23, 28, 30-44 AND 46*

Representative claim 15 requires an "interface being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone" (FF 1). We find that (1) Sainton discloses a port 112 of a computer 104 that is connected by a cable 114 to a connector 118 of a cellular telephone 116 (FF 6), and (2) Morris teaches a cellular phone 38 that is operational when slid into a cavity 18 of computer 22 (FF 7). We conclude that it would have been obvious to one of ordinary skill in the art to substitute the cable connection of Sainton with the direct connection of Morris that occurs when the phone is slid into the computer.

Appellants' arguments, that Sainton and Morris were improperly combined by the Examiner, does not account for the Supreme Court's precedent in *KSR*. *KSR* instructs "that when a patent claims a structure already known in the prior art that is altered by mere substitution of one element for another known element in the field, the combination must do more than yield a predictable result." *KSR* at 1740. We find that one of ordinary skill in the art would have understood that substituting the direct connection of Morris for the cable connection of Sainton would have yielded a predictable result, *i.e.* the continued connection of the phone 116 of Sainton to the computer 104.

Therefore, for the foregoing reasons, Appellants have not shown error in the Examiner's rejection of representative claim 15. Thus, we will sustain the Examiner's rejection of claim 15.

As contended by Appellants, each of the independent claims, *i.e.*, claims, 15, 30, 38, 43 and 46 requires an interface that is directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone. (App Br. 9-12). Further, Appellants did not present any specific arguments pertaining to (1) claims 17, 19, 22, 23 and 28 that depend from claim 15; (2) claims 31-37 that depend from independent claim 30; (3) claims 39-42 that depend from claim 38; and (4) claim 44 that depends from claim 43. Thus, Appellants' arguments have failed to convince us of error in the Examiner's conclusion of obviousness for claims 17, 19, 22, 23, 28, 30-44, and 46.

Therefore, for the foregoing reasons discussed above with regards to independent claim 15, we will sustain the Examiners rejection of (1) claims 17, 19, 22, 23 and 28 that depend from claim 15; (2) independent claim 30

and claims 31-37 that depend from independent claim 30; (3) independent claim 38 and claims 39-42 that depend from claim 38; (4) independent claim 43 and claim 44 that depend from claim 43; and (5) independent claim 46.

THE REJECTION OVER SAINTON, MORRIS AND KYU

*CLAIM 16*

The Examiner rejected claim 16 under 35 U.S.C. § 103(a) as unpatentable over Sainton, Morris, and Kyu (Ans. 6). We find that Appellants did not address the merits of the rejection of claim 16 with respect to Kyu. Thus, given the strength of the Examiner's prima facie showing with respect to Sainton and Morris, Appellants' rebuttal does not overcome a final conclusion of obviousness for claims 16. Thus, the rejection of claim 16 is therefore sustained.

THE REJECTION OVER SAINTON, MORRIS AND DENT

*CLAIM 18*

*Appellants' Contentions*

Appellants argue that claim 18 depends from claim 15, and is therefore allowable for the same reasons set forth in support of the allowance of claim 15 (App. Br. 21). Further, Appellants assert that "[e]ven if, arguendo, Dent et al teaches a cellular terminal is parked, as suggested by the Examiner, Dent does not provide any teaching that overcomes the previously described deficiencies of the Sainton and Morris references" (App. Br. 21).

Also, Appellants argue that one having ordinary skill in the art would not have been led to include a power signal 'since this would have allowed for recharging the cell phone'" (App. Br. 21). Further, Appellants argue that there would be no possibility of the battery being recharged, as Morris requires that the battery in the portable phone 38 be removed while portable phone 38 is connected to computer 22 (App. Br. 21).

*Examiner's Findings and Conclusions*

The Examiner found that while Sainton does not teach the interface having a power line, Dent teaches a cellular terminal, such as a cellular telephone, that is powered by an external signal line while the cellular terminal is parked. The Examiner concluded that it would have been obvious to include a power signal line because this would have allowed for recharging the cell phone (Ans. 6).

Further, in response to Appellants' argument that one of ordinary skill in the art would not have been led to include a power signal because it would have allowed for recharging of a battery that was removed in Morris, the Examiner found that "the rejection was Sainton in view of Morris not Morris exclusively" (Ans. 14). The Examiner then found that "Sainton expressly teaches the portable phone having a battery" (Ans. 14).

ISSUE

The issue turns on whether the combination of Sainton, Morris and Dent teaches or suggests an interface coupled to the microprocessor that includes a power lead.

### ADDITIONAL FINDINGS OF FACT

8. Claim 18 depends on independent claim 15 and recites, "wherein said interface coupled to said microprocessor further includes a power lead" (Claims Appendix, p. 1).

9. Sainton discloses that an interface cable of a telephone system, which is part of the interface hardware that is specific to the particular telephone, can be powered by either a portable computer battery or portable telephone battery (Sainton, col. 2, ll. 45-54).

10. Figure 3 of Dent depicts a base station 110. Power supply 150 is connected to power line connector 134 and provides the power supply voltages to the circuitry of base station 110 (Dent, col. 7, ll. 17-21). Figure 3 also illustrates an interface 138 that is connected to cellular terminal 120 when parked, and also connected to battery charger 153 (Dent, Fig. 3).

### ANALYSIS

Dependent claim 18 requires an interface coupled to the microprocessor that includes a power lead (FF 8). We find that Sainton discloses a portable telephone having a battery (FF 9), and Morris teaches an interface that has a cavity which accommodates a telephone (FF 7). We also find that Dent teaches a base station 110, on which a cellular terminal can be parked (*i.e.*, a base station that accommodates a telephone), that is connected to a power supply via a power line connector 134 (FF 10).

Further, we agree with the Examiner that the rejection is over Sainton and Morris, and not Morris alone. The Supreme Court noted in *KSR* that an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account

of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, at 1741. Thus, Appellants' argument that one of ordinary skill in the art would not have been led to include a power signal because it would have allowed for recharging of a battery that was removed in *Morris*, does not take into consideration a person of ordinary creativity.

We find, based on the Findings of Facts above, that while *Morris* does not explicitly teach an interface coupled to a microprocessor that includes a power lead, one of ordinary skill in the art, and of ordinary creativity, would have been motivated to combine *Sainton*, *Morris*, and *Dent*, such that the battery of the portable telephone of *Sainton* would have remained on the telephone while parked in an interface having a microprocessor (*e.g.*, a computer like that of *Morris*) such that the battery could be recharged by a power supply connected to the interface by a power line (*e.g.* like the power line connected to the interface in *Dent*). Thus, we agree with the Examiner that it would have been obvious to one of ordinary skill in the art to include a power signal line because this would have allowed for recharging the cell phone.

Appellants' arguments have failed to convince us of error in the Examiner's final conclusion of obviousness for claim 18. Thus, we will sustain the Examiner's rejection of claim 18.

#### THE REJECTION OVER SAINTON, MORRIS AND KOBAYASHI

##### *CLAIM 45*

The Examiner found that "Kobayashi teaches an item that fits completely within a cavity of a portable computer forming a clean smooth surface" (Ans. 15). The Examiner also concluded that *Morris* only teaches

the "portable telephone fitting partially within a cavity of the computer," and when it is connected the phone portion sticks out (Ans. 15). The Examiner found that "[a] clean smooth surface would be more aesthetically pleasing than a large phone outdent," and that it would have been obvious to one of ordinary skill in the art at the time of the invention to fit the phone totally within a cavity (Ans. 15).

Appellants argue (1) that it would also have been obvious to fit a separate portable telephone within the surface of Kobayashi's notebook computer, and (2) Appellants suggest that circuitry in Kobayashi would have to be removed to accommodate the entire portable telephone (App. Br. 22). Further, Appellants argue that the 35 U.S.C. §103 (a) rejection is improper, as the Examiner's purported motivation for the combination, *i.e.*, that it would be aesthetically pleasing, is more supposition that is not supported by fact (App. Br. 22).

## ISSUE

The issue turns on whether the prior art teaches or suggests a portable telephone that fits completely within a cavity when directly connected to an interface.

## ADDITIONAL FINDINGS OF FACT

11. Claim 45 depends on claim 43 and recites "wherein said portable telephone fits completely within said cavity when directly connected to said interface" (Claims Appendix, p. 4).

12. Kobayashi discloses that "[i]n the fitted state, the top and rear faces of the battery back 21 are exposed, as shown in FIGS. 2 and 3, thus



constituting part of an outer rear face of the housing 1." The top and rear faces of the battery pack 21, in particular, are situated flush with the rear half portion 8 of the top surface of the housing 1 and the rear face thereof, respectively." "The top face of the pack 21 is also flush with the top face of the display unit 12 in the closed state." (See Kobayashi, col. 5, ll. 18-26; Fig. 2; Fig 3).

13. Morris discloses an "apparatus for removably connecting a cellular portable telephone to a laptop or portable computer" (Morris, col. 1, ll. 44-46).

#### ANALYSIS

As shown in Fig. 2 of Kobayashi, the battery pack fits within the cavity of the computer (FF 12). Thus, Kobayashi teaches fitting an object completely within a cavity of a computer. Pursuant to *KSR*, "[a] person of ordinary skill is also a person of ordinary creativity." *KSR* at 1742.

Thus, we agree with the Examiner that it would have been obvious to one of ordinary skill in the art, and ordinary creativity, to likewise fit a portable telephone completely within a cavity of a computer, as it would make the phone and computer combination more aesthetically pleasing. We also find that it would have also made the combination more compact, and thus, more portable. We also find that portability is a characterization of the invention of Morris (FF 13). Thus, it would have been obvious to one of ordinary skill in the art to combine Kobayashi with Sainton and Morris to make the phone and computer combination more aesthetically pleasing and portable.

Appellants' arguments have failed to convince us of error in the Examiner's final conclusion of obviousness for claim 45. Thus, we will sustain the Examiner's rejection of claim 45.

#### CONCLUSIONS OF LAW

Appellants have not shown that the Examiner erred in rejecting claims 15-19, 22, 23, 28, and 30-46 under 35 U.S.C. § 103.

#### ORDER

We have sustained the Examiner's rejections with respect to all claims on appeal. Therefore, the Examiner's decision rejecting claims 15-19, 22, 23, 28, and 30-46 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (1) (iv).

AFFIRMED

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TEXAS INSTRUMENTS INCORPORATED  
P O BOX 655474, M/S 3999  
DALLAS, TX 75265